



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/798,240	03/11/2004	Dale J. Carter	2635.CIRQ.NP	3555
26986	7590	05/31/2007	EXAMINER	
MORRISS O'BRYANT COMPAGNI, P.C. 734 EAST 200 SOUTH SALT LAKE CITY, UT 84102			TRAN, HENRY N	
ART UNIT		PAPER NUMBER		
2629				
MAIL DATE		DELIVERY MODE		
05/31/2007		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/798,240	CARTER ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Henry N. Tran	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 07 May 2007.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-10, 12-23 and 25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-10, 12-23 and 25 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_
- 5) Notice of Informal Patent Application
- 6) Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/7/07 has been entered. Claims 1-10, 12-23, and 25 remain pending in this application.

### ***Response to Arguments***

2. Applicant's arguments provided in pages 10-13 of the Amendment filed 5/7/07 have been fully considered with the results set forth follows:

(i) Applicant's amendments to the claims 1, 9, 10, 12, 14, 15, 22, and 23 have overcome the rejections to the claims. The rejections under 35 U.S.C. 112, second paragraph, of claims 1-10, 12, 14-23, and 25 as recited in item 6 of the prior Office action mailed 11/6/06 have been withdrawn.

(ii) Applicant's arguments with respect to the rejections under 35 U.S.C. 103(a) of claims 1-10, 12-23, and 25 have been fully considered but they are not persuasive because of the following reasons.

Applicant argued that applicant's device sensor is "a magnetic sensor system" for determining "the static orientation of the device" using "a first known position", and "the orientation is determined relative to a constant magnetic field"; whereas, the gyro sensor system

Art Unit: 2629

of Rekimoto does not care about “a first known position”; and “does not know what position the device is in”; and therefore, the gyro sensor of Rekimoto is not capable of determining of orientation of the electronic device in three dimensions. The examiner respectfully disagrees because of: (a) First, it’s noted that the claimed limitations defined after the phrase “is capable of” recited in the base claims 1, 13, and 14 are considered as “suggested” or “makes optional” but do not require the steps to be performed or does not limit the claims to a particular structure. see MPEP § 2106 & 2111.04; (b) Second, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., “a magnetic sensor system”, “the static orientation of the device”, “a first known position”, “lying flat and level on a horizontal table”, ...etc) are not recited in the rejected claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims; See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993); (c) Third, Rekimoto does teach that when the portable electronic device (50) is rotated in three dimensions, the triaxial gyro sensor system (1) is used to detect each rotational angle around to the X-axis, Y-axis, and Z-axis; see figure 1, and col. 2, lines 57-62; the rotation of the whole device is detected for determining the orientation of the device in three dimensions; see col. 11, lines 6-8; and (d) Rekimoto further teaches that the rotational angle ( $\omega$ ) is detected based on the Coriolis force  $F$ , which is proportional with the sensor mass ( $m$ ) that is conventionally dependent upon the earth's magnetic field, which is considered as a constant magnetic field, see figure 2, col. 2, line 66 to col. 3, line 16. Accordingly, Rekimoto sensor system (1) is read on the claimed “a first sensor”.

The rejections under 35 U.S.C. 103(a) of claims 1-10, 12-23, and 25 are therefore sustained; and are recited followings.

***Specification***

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: “a constant magnetic field” defined in the base claims 1, 13, and 14.

***Claim Rejections - 35 USC § 103***

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 1, 2, 4, 13-15, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davis (U.S. Patent No. 6,292,674) in view of Rekimoto (U.S. Patent No. 6,567,068).

6. Regarding claims 1 and 2, Davis, figures 1 and 3, teaches a portable electronic appliance, which is a mobile telephone (10), comprising: a portable electronic appliance having a housing (12), a data entry device (26) and a display screen (30); a first sensor (504) (a motion sensor 504, see figure 5, and col. 6, lines 9-13); and a second sensor (304) (a capacitive switch 304, see figure 3) disposed on a surface of the housing for a user to only make physical contact with the second sensor to thereby actuate the second sensor; and wherein the first sensor and the second sensor provides contact data to a sensor circuit (346) (a Switch Detector 346) disposed within the portable electronic appliance, wherein the contact data in the sensor circuit is utilized by a processor (22) (a Controller 22) within the portable electronic appliance to determine whether or

not to activate or deactivate a predetermined function of the portable electronic appliance; see col. 4, lines 13-41; col. 5, lines 12-20; and lines 42-64.

However, Davis does not expressly teach that the first sensor is used for determining orientation of the portable electronic appliance in three dimensions relative to a constant magnetic field.

Rekimoto, figures 1 and 2, teaches a portable electronic device (50), which is a personal digital assistant (PDA 50) that comprises a gyro sensor used for detecting the displacement of the device in three dimensions space by determining the orientation of the device in three dimensions relative to the earth's magnetic field, which is conventionally considered as a constant magnetic field, by detecting each rotational angle when the device is rotated around the X-axis, the Y-axis, and the Z-axis; see figures 1 and 2; col. 2, line 66 to col. 3, line 16; and col. 11, lines 6-8.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the sensor as taught by Rekimoto in the Davis device because this would provide a compact portable electronic device for enhancing predetermined functional selections interfaces bases on the displacement of the device housing; see Rekimoto, col. 1, lines 40-61.

By this rationale, claims 1 and 2.

7. Regarding claim 4, Davis further teaches that the at least one second sensor (304) is a pressure sensitive switch (the user grasps and or squeezes the housing); see Fig. 2, col. 5, lines 29-36). Claim 4 is dependent upon the base claim 1; and is therefore rejected on the same reasons set forth in claim 1, and by the reason noted above.

8. Regarding claim 13, which comprises claimed elements and limitations of claim 1, rephrased to claim the second sensor is disposed underneath a surface of the housing. Davis does teach that the second sensor (304) is a capacitive sensor; and is disposed underneath a surface of the housing for providing sensing data to the controller (22) for determining whether or not to activate or deactivate a predetermined function, see figure 3, and col. 5, lines 40-55. Official notice is taken for the claimed limitation of “the second sensor provides proximity sensing data”, because a capacity sensor that provides proximity sensing data is well known and expected in the art of capacitive sensor for enhancing machine-user interfaces. Claim 13 is therefore rejected on the same basis set forth in claim 1 and by the reasons noted above.

9. Regarding claims 14, 15 and 17, which are method claims corresponding the apparatus claims 1, 2 and 4; and are therefore rejected on the same basis set forth in claims 1, 2 and 4.

10. Claims 3, 5-10, 12, 16, 18-23 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davis (U.S. Patent No. 6,292,674) in view of Rekimoto (U.S. Patent No. 6,567,068), hereinafter referred to as “Davis-Rekimoto”, as applied to claims 1 and 14 discussed above, and further in view of Smith et al (U.S. Patent No. 7,088,343, hereinafter referred to as “Smith”.

Davis-Rekimoto teaches generally all except for the second sensor comprises a capacitive touchpad capable of arcuate surfaces, or sensing touch, or proximity sensing, or performing a functional operation such as adjusting volume.

Smith teaches a portable electronic device comprise a capacitive touchpad (102)

Art Unit: 2629

capable of arcuate surfaces, or sensing touch, or proximity sensing, or performing a functional operation such as adjusting volume; see figures 2-5; col. 10, lines 45-58; col. 11, lines 31, 61-66; and col. 17, lines 5-33. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the touchpad of Smith in the Davis-Casebolt device because this would provide an enhanced functionality of the device-operator interface. By this rationale, claims 3, 5-10, 12, 16, 18-23 and 25 are rejected.

***Conclusion***

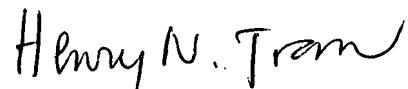
11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. They are U.S. Patents Nos.: 6,610,936 and 6,567,101, which teaches portable electronic devices; wherein the device orientation or contact data are determined using a detector or capacitive sensor.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Henry N. Tran whose telephone number is 571-272-7760. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin H. Shalwala can be reached on 571-272-7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2629

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Henry N Tran  
Primary Examiner  
Art Unit 2629

HT

5/25/07